*Untersuche die Vorgänge bei der Abkühlung eines Metalls*

**Chemikalien:** ca. 100g Zinn

**Geräte:** Feuerfeste Arbeitsplatte, Dreifuß, Tondreieck, Schmelztiegel 25 mL, Waage, Stativmaterial, Gasbrenner, Feuerzeug, Uhr, Digitalthermometer, Schutzbrille

**Durchführung:**

1. Gasbrenner auf die feuerfeste Arbeitsplatte stellen, Schmelztiegel mit Zinn befüllen und im Tondreieck auf den Dreifuß stellen.
2. Fühler des Thermometers schräg so am Stativ befestigen, dass es während des Experimentes in der Schmelze verbleiben kann.
3. Zinn erschmelzen, Thermofühler mittig eintauchen, fixieren und Schmelze weiter auf 400°C erwärmen.
4. Brenner ausschalten.
5. Temperatur im Zinn ab 380°C alle 30 Sekunden protokollieren (bis ca. 180°C).
6. Tabelle in Abkühlungskurve umsetzen.

**Beobachtung:**

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| Zeit | 0 | 0:30 | | 1:00 | | 1:30 | | 2:00 | | 2:30 | | 3:00 | | 3:30 | | 4:00 | | 4:30 | | 5:00 |
| *T* (in °C) | 380 |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
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| Zeit | 5:30 | 6:00 | | 6:30 | | 7:00 | | 7:30 | | 8:00 | | 8:30 | | 9:00 | | 9:30 | | 10:00 | | 10:30 |
| *T* (in °C) |  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |

**Auswertung:**

380

350

300

250

200

180

Temperatur in °C

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Zeit in Minuten